

Friday, December 16, 2011 12:49:33 PM

**\*77691\***

Page 1

**\*N900040100\***

Setup Start \*NS1\*

Stop **\*NS2\***

**\*4\***

**Cust Item ID:**

**\*4\***

**Customer:**

**Reference:**

e: 11-12-16

Date:

Date:

Run Start \*NR1\*

Stop \*NR2\*

**Insp.  
Stamp**

Rev C

0.00

**\*100\***

## Large Fab

### Large Fab

## Memo

0.00

## Large Fab

Weld assembly as per dwg D3443

110

QC9- Inspect visual per QSI004- Fusion Welds

0.00

**\*110\***

QC

## Memo

0.00

## Quality Control

120

QC5- Inspect part completeness to step on W/O

0.00

**\*120\***

QC

## Memo

0.00

## Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 77691

**\*77691\***

Page 2

Friday, December 16, 2011 12:49:33 PM

Item ID: D3443-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Strut Weldment Assembly  
 Start Date: 12/16/2011 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 1/6/2012 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel	0.00							
<b>*130*</b>									
Powdercoat	Memo	0.00							
Powder Coating	1-Mask holes as per dwg D3443								
	START TIME: 10:15								
	OVEN TEMPERATURE: 400 °F								
	FINISH TIME: 10:45								
140	QC3- Inspect Part Finish	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									
150	Small Fab	0.00							
<b>*150*</b>									
Small Fab	Memo	0.00							
Small Fab	Assemble bearing and ball plungers as per dwg D3443 using DT9518								
	Ensure bearing rotates smoothly								

8x0 m-f 12/02/06

8 BL 12-2-6

ES 12/02/06 (S)

W119480

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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**Work Order ID 77691****\*77691\***

Page 3

Friday, December 16, 2011 12:49:33 PM

Item ID: D3443-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Strut Weldment Assembly  
Start Date: 12/16/2011 Start Qty: 4.00 **\*4\*** Cust Item ID:  
Required Date: 1/6/2012 Req'd Qty: 4.00 **\*4\*** Customer:

**Reference:**

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 <b>*160*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00		SP 12/02/06	8				
170 <b>*170*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>ST</u>  Memo	0.00  0.00							SP 12/02/07 8
180 <b>*180*</b> QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							12/2/11 J

12-02-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Friday, December 16, 2011 12:49:38 PM

Page 1

Work Order ID: 77691

\*77691\*

Parent Item: D3443-041

\*D3443-041\*

Parent Item Name: Strut Weldment Assembly

Start Date: 12/16/2011

Required Date: 1/6/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV. A 05.11.17 NEW ISSUE EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3443-1		Manufactured	No			100	Each	4.0000	1	4			
*D3443-1*													
Lug													

78200x8

Location

Loc Qty

Loc Code

WA022

4

73613

4

D3443-5		Manufactured	No			100	Each	12.0000	1	4			
*D3443-5*													
Tubing													

~~78200x8~~

Location

Loc Qty

Loc Code

WA022

12

73099

2

73625

10

D3453-1		Manufactured	No			100	Each	4.0000	1	4			
*D3453-1*													
Clevis													

78205x8

Location

Loc Qty

Loc Code

WA022

4

73470

4

D3965-4		Manufactured	No			100	Each	8.0000	1	4			
*D3965-4*													
Bearing, Spherical													

Location

Loc Qty

Loc Code

ST100

8

71181

2

73614

6

12/02/06  
378208  
(4x)

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Picklist Print

Friday, December 16, 2011 12:49:38 PM

Work Order ID: 77691

\*77691\*

Parent Item: D3443-041

\*D3443-041\*

Parent Item Name: Strut Weldment Assembly

Start Date: 12/16/2011

Required Date: 1/6/2012

Start Qty: 4.00

Required Qty: 4.00

D3966-4-750

Manufactured No

100

Each

93.0000

2

8

\*D3966-4-750\*

\*\*

127-29

Pin, Dowel

Location

Loc Qty

Loc Code

ST100

93

73566

93

16

# Dart Aerospace Ltd

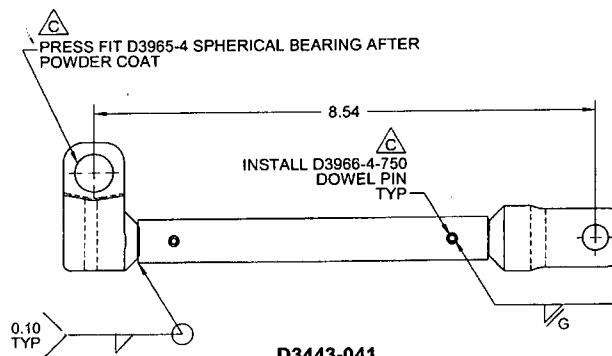
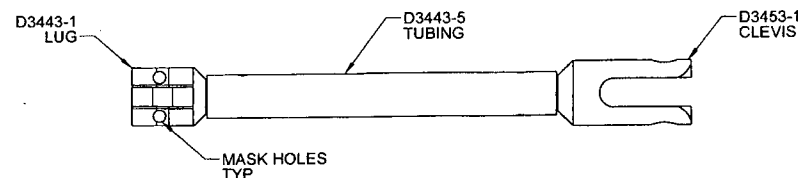
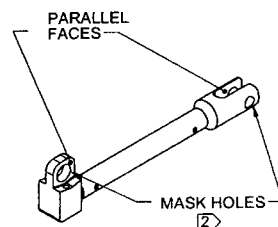
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	QTY	P/N	DESCRIPTION
1	X	D3443-041	STRUT WELDMENT ASSEMBLY
2	1	D3443-1	LUG
3	1	D3443-5	TUBING
4	1	D3453-1	CLEVIS
5	1	D3965-4	BEARING, SPHERICAL
6	2	D3966-4-750	PIN, DOWEL



**D3443-041**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3  
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.33 lbs
- 8) WELD PER DART QSI 004

SHOP COPY  
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WITHOUT NOTICE  
WORK ORDER NO. 77691

RELEASED  
9/15/25 MP

11-12-16

C	DRAWING UPDATED TO CURRENT STANDARDS. REVISED NOTE #2 (ZN A8-1, A8-2); 0.820 WAS 0.720 & 1.43 WAS 1.53 (ZN C2-3); 0.551 WAS 0.451 (ZN C1-3); R0.219 WAS R0.050 (ZN C4-3); D3965-4 WAS SPAENAU P/N (ZN C6-1, B5-2); D3966-4-750 WAS MCMASTER-CARR P/N (ZN B5-1); REF PAR 09-018	RF	09.06.25
B	ADDED -9 PIN; REMOVED BALL PLUNGER; REVISE TOLERANCE; & Ø0.125 WAS #30	RF	05.12.05
A	NEW ISSUE	RF	05.09.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.06.25		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.

D3443

REV. C  
SHEET 1 OF 4

TITLE

STRUT WELDMENT ASSEMBLY

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# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

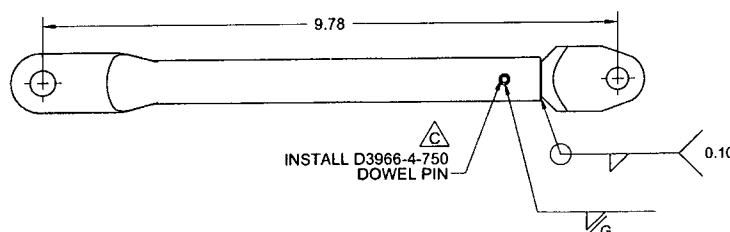
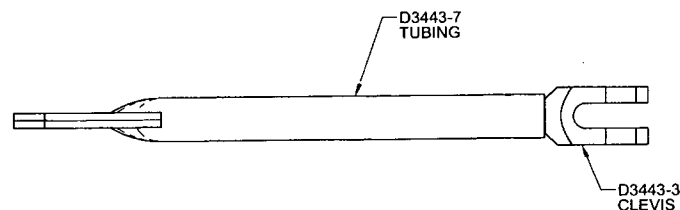
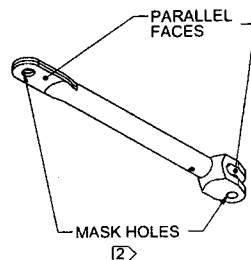
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	QTY -043	P/N	DESCRIPTION
1	X	D3443-043	STRUT WELDMENT ASSEMBLY
2	1	D3443-3	CLEVIS
3	1	D3443-7	TUBING
4	1	D3966-4-750	PIN



**D3443-043**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3  
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.97 lbs
- 8) WELD PER DART QSI 004

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO. <b>D3443</b>	REV. C
MFG. APPR.			SHEET 2 OF 4
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DE APPR.		<b>STRUT WELDMENT ASSEMBLY</b>	NTS
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77691

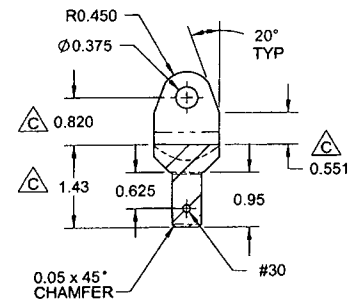
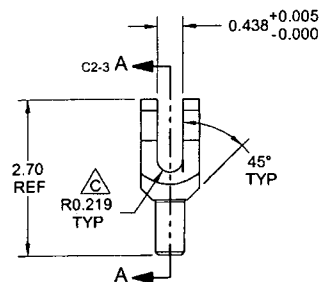
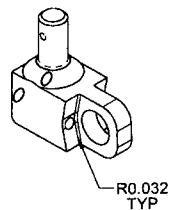
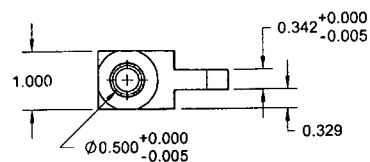
W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

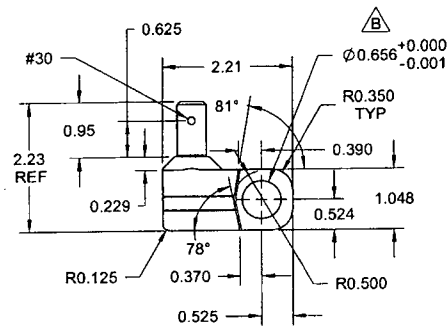
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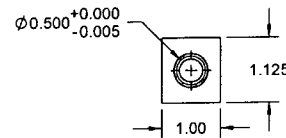
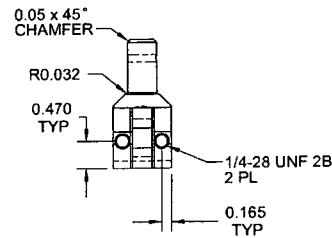
**NOTE:** Date & initial all entries



**SECTION A-A C4-3**



**D3443-1 LUG**




**D3443-3 CLEVIS**

**NOTES:**

- 1) MATERIAL: D3443-1 = 17-4 SS PER AMS 5604/5643 (REF DART SPEC M17-4B)  
D3443-3 = AISI 304 SS ROUND BAR (REF. DART SPEC M304R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3443-1 = 0.50 lbs  
D3443-3 = 0.35 lbs

77691

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09/08/25/11

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
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CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.		<b>D3443</b>	SHEET 3 OF 4
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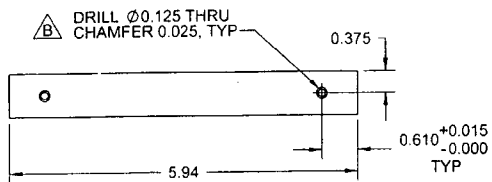
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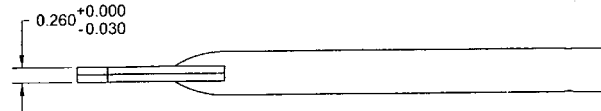
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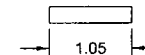
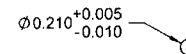




**D3443-5 TUBING**



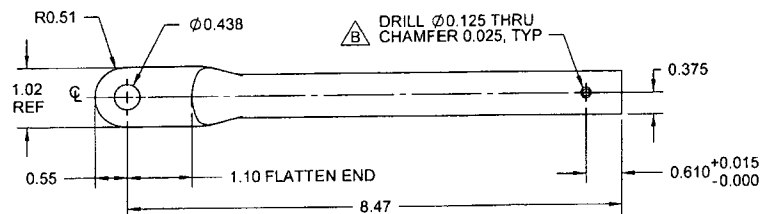
**D3443-7 TUBING**



**D3443-9 PIN**

**D3443-9 NOTES:**

- 1) MATERIAL: DELRIN II 150R OR ACETRON GP ACETAL (REF. DART SPEC M-DELRIN-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A






**D3443-5/-7 NOTES:**

- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC M304TR0.750W.120)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.025 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3443-5 = 0.41 lbs  
D3443-7 = 0.62 lbs

17691

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DESIGN	RF	<b>DART AEROSPACE LTD</b>	
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CHECKED	RF	DRAWING NO.	REV. C
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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